

Trans-Lake Washington Project EIS Methodology Report – 6/10/02

Visual Quality

Guiding Plans and Policies

- Washington Highway Beautification Act (RCW 47.40.010)
- Washington Transportation Commission Policy 6.3.6.
- Federal Highway Beautification Act of 1965 (23 CFR 750)
- ISTEA Transportation Enhancement Program (23 USC 101[g], 133[b])
- Visual Impact Assessment for Highway Projects, FHWA, Mar. 1981 (DOT-FH-11-9694)
- Esthetics and Visual Resource Management for Highways, FHWA, Oct. 1977
- WSDOT Roadside Classification Plan, 1996
- WSDOT Roadside Manual (M25-30), primarily Div. 5
- WSDOT Environmental Procedures Manual, Section 459, July 2001.

Data Needs and Sources

- Base maps from the project GIS system that illustrate site topography, extent of significant vegetation, open spaces, street pattern, shoreline, and specific land uses.
- Recent (November 2000 or later) aerial photographs overlaid with major project components. The project team will provide aerial photographs. Plots from the GIS system are acceptable.
- Comprehensive Plans, Parks and Open Space Plans, Shoreline Master Programs, and Pedestrian/Bicycle Plans from Seattle, Medina, Hunts Point, Yarrow Point, Clyde Hill, Kirkland, Bellevue, and Redmond.
- Design features of alternatives, including horizontal and vertical alignments information for each alternative, structure elevations, preliminary design of lids, noise walls, stations, retaining wall location, type and height, water treatment facilities, and other facilities.
- Existing Roadside Classification: landscape character, viewer groups (from and toward), key views, viewsheds, and viewer exposure to alternatives.
- Collected information will be confirmed by site reconnaissance and meetings with local jurisdictions.

Proposed Coordination with Agencies

Local agencies will be contacted to obtain materials that provide information on visual conditions along the existing SR 520 corridor and relevant public policies. This information will be used to determine what the local values are and how they relate to viewer sensitivity. This determination will, in turn, assist in characterizing and assessing potential impacts of the proposed project. Telephone contact and/or face-to-face meetings with agency staff will supplement information obtained from planning documents. Agencies will include:

- City of Seattle, Office of Strategic Planning
- City of Seattle, Department of Construction and Land Use
- City of Seattle, Department of Parks and Recreation
- University of Washington, Offices of the Planner, Landscape Architect, and Director of the Washington Park Arboretum
- City of Medina, Planning Director
- Town of Hunts Point, Planning Director
- Town of Yarrow Point, Planning Director
- City of Clyde Hill, Building Department
- City of Kirkland, Department of Planning and Community Development
- City of Bellevue, Planning and Community Development
- City of Redmond, Planning and Community Development
- Community/neighborhood groups of areas adjacent to project.

Proposed Coordination with Team, WSDOT, and Sound Transit

The visual quality analyst will work with the leaders of the following environmental elements to obtain an understanding of anticipated impacts.

- Relocations – public facilities, residential and commercial land uses, significant natural features, and other visual resources.
- Land Use – if and where any substantial changes in land use would be expected.
- Transportation – surface street alterations; changes in access; impacts on pedestrian, bicyclist, and commuter facilities.
- Recreation, Section 4(f)/6(f), and Cultural Resources – locations of potential impacts and appropriate mitigation.
- Vegetation and Wildlife – impacts on habitat landscapes, locations, and potential mitigation.
- Structural Engineering- how structures will be designed to accommodate engineering needs.

In addition, the methodology to be used for visual simulations will be coordinated with the design team and public involvement team.

Study Area

The visual quality analysis will include views from the facility and toward the facility including neighborhoods that are directly adjacent to the proposed alternatives. Neighborhoods include Eastlake, Portage Bay, Roanoke, North Capitol Hill, Montlake, University, Laurelhurst, and Madison Park in Seattle; Medina; Hunts Point; Yarrow Point; Clyde Hill; Lakeview in Kirkland; Northtown, Bridle Trails, and Bel-Red/Northup in Bellevue; and Overlake, Grass Lawn, Downtown Redmond, Northeast Redmond, and Southeast Redmond in Redmond. Key views, viewer groups, and viewsheds will be identified.

Affected Environment Methodology

The study will identify existing conditions along the SR 520 corridor that could be changed substantially by one or more of the proposed alternatives. Information will be collected to provide a description of existing baseline conditions. The description will be expressed in terms of the parameters: vividness, intactness and unity. These parameters are intended for use in the discussion of potential impacts.

The viewshed for each of the proposed alternatives will be mapped using existing topographic and land cover information and the proposed vertical and horizontal alignments of the alternatives. These defined viewsheds, or visible areas, will comprise the study area for the visual impact analysis. The team will divide the project viewshed into landscape units, which will be noted on the base maps and documented with digital photography. Landscape units will be defined by their visual characteristics that make each unit distinct from the surroundings. Specific defining characteristics include:

- Character of existing resources, including topography, vegetation, land use patterns, community values (preferences, identity and goals, and historical aspects), neighborhood boundaries and edges, building scale and massing, and building/open space texture.
- Street grid, development texture, and open space patterns.
- Parks, pedestrian/bicycle routes, and other recreation areas.
- Key views and areas of special visual or aesthetic character, including shoreline views and distant scenic views.
- Individual buildings, landmarks, or clusters of development that help define the visual character of an area.

Key views within the viewshed will be identified through the project limits based on existing plans and policies (including Shoreline Master Plans), site reconnaissance, and public input. Views looking toward and from the facility will be considered and mapped. Appropriate project team members will assess the key views to determine which views will be carried forward for the analysis. The selected views will represent the major issues and modifications to the landscape generated by the alternatives. Existing and proposed

conditions of the selected key viewpoints for each alternative will be documented, included in the quantitative analysis, and simulations of the proposed alternatives will be developed.

Potential resident and transient viewer groups will be identified. Viewer groups could include:

- Residents within the area
- Business people and their customers
- Travelers in the study area
- Individuals visiting waterfront services, public parks, pedestrian/bicycle routes, and viewpoints
- Nonresident special interest groups (historic preservation society, open space advocates, pedestrian/bicycle advocates)
- Other interested parties identified through the public participation processes

Environmental Consequences Analysis Methodology

The Environmental Consequences analysis will assess potential direct and construction effects of the proposed alternatives on the quality of views of and along the SR 520 corridor. Potential impacts will be identified along the SR 520 corridor for each alternative. Simulations of selected viewpoints will be developed to illustrate a representation of the potential appearance of project elements, including elevated and at-grade sections, bridges, lids, tunnel entries, landscaping, maintenance centers, pedestrian areas and other related facilities or structures. Simulations will reflect the actual or anticipated viewer position (inferior, level, or superior) for the viewer groups.

The methodology to be used for visual simulations will be coordinated with the design and public involvement team leaders to ensure that the analysis will serve multiple functions in design, EIS preparation, and public presentations.

Direct Impacts

An analysis of the alignment plans and simulations from key viewpoints will be used to describe and evaluate the level of direct impact on the visual character of each of the landscape units within the study area. The level of impact will be related to the following:

- Shadows and sun blockage and the relationship of shadows to the apparent mass of the project elements.
- The level of visual compatibility of project elements to the landscape and built elements that compose the visual character of each landscape unit. Key elements include:
 - Elimination of landscape and built environment elements
 - New or replacement structures and their relationship to the built environment
 - View components of foreground, middle ground, and background

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- Relationship of project elements to view vividness, intactness, unity, and other relevant criteria
 - Relationship of project elements (e.g., noise walls, detention ponds) to the scale, form and massing, materials, and color of the landscape and built environment components within the landscape unit
 - Relationship to the street grid and landscape, and the character and texture of built and open space areas
 - Relationship to views of the shoreline and distant views from public places
 - Light and glare impacts on the surrounding landscape
 - Viewer sensitivity to the potential change. Sensitivity factors include:
 - Viewer numbers
 - Viewer position
 - Viewer activity
 - Frequency of viewer exposure
 - View duration
 - Cultural significance

The level of change (high, moderate, low) within each landscape unit will be identified by combining the level of change and viewer sensitivity evaluation information. The FHWA methodology will be followed.

Construction Impacts

For short-term construction impacts on the viewshed, views will be analyzed similarly to direct impacts.

Mitigation Measures

Discussion of mitigation will cover measures to avoid or that minimize potential impacts on visual resources. Mitigation for visual quality will work to achieve a project that is compatible with the context of the environment. Agency staff and the design team will be consulted to assist in the identification of mitigation measures, and to determine if design alterations are prudent and feasible means of mitigating impacts.

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